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On The Use of The Cold Affusion In Certain Diseases.

Bolitha Laws

An

Inaugural Essay,
on
The Remedial Efficacy
of
The Cold Affusion;
In
Certain Diseases.

By

Bolitha Laws

of Dover Delaware.

Passed March 20th 1823

"Nullum est jam dictum, quod
non dictum prius." Terence. *

November 1822.

* Bolitha Laws

To

The Medical Professors

In

The University of Pennsylvania,

This Essay

is

Respectfully Dedicated,

as

A Tribute of Respect to them,

Individually as Gentlemen, and

collectively as forming

The First Medical School

In

The United States.

by the Author

Bolitha Laws

Preface.

In selecting the following subject for my Inaugural Dissertation, I am not conscious that I am about to advance anything which has peculiar claims to originality of thought, or which has never been sanctioned by the experience, and supported by the writings of others. Whilst in obedience to that law, which requires every Candidate for a Degree of Medicine, to write an Essay on some medical subject, the following treatise, the first fruit of a Medical education, is submitted for your examination; and I shall have attained my object if it should be found, that I have arranged and properly explained a subject, which is interesting and important to the Profession, by a proper disposition and comparison of the sentiments of those who have gone before me, and by fair deductions from the facts which they have established.

Indeed the time which is allotted to a Student for the prosecution of his Medical Studies, is so short, and the Authors that have written on every subject in Medicine are so numerous, that little more can be expected from an inaugural dissertation than a compilation of facts culled from the best Authors. The

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the collection and arrangement of facts from the most celebrated writers is a task, which few, uninstructed by experience, will properly accomplish: For a distinguished Surgeon has told us; "If you adhere to one Author, you are inevitably wrong; if you read many you are bewildered; and indeed a whole life spent in practice will hardly teach you to reconcile facts, or to attain that steadiness of temper, and maturity of judgment, which should carry you through your professional duties with confidence & peace of mind."* It is with diffidence and not without apprehensions of failing in the attempt, that I embark in the undertaking. Those to whom this essay is submitted, I feel satisfied will make every allowance for youth and inexperience, which the dignity of their stations will permit. It may not be improper to state some of my reasons for selecting the following subject for my Thesis. Considering the power of the cold bath in diminishing animal heat when morbidly increased, and the benefit which many persons have derived from its use, while laboring under nervous and other affections, I have, for some time, thought that it might be more extensively employed in disease, than it is,

*John Bell's principles of Surgery.

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at present, by County Practitioners. This opinion has been founded partly on observation of the beneficial effects, which many persons have derived, from visiting the Mineral springs in various sections of this Country. I shall not enter into the discussion, which has so long divided the Medical World, with respect to the real causes of benefit to these visitors; whether the salutary effects, which have been observed, be attributable to relaxation from business, gestation and the agreeable company which is always to be found at such places; or to the medicinal virtues, existing in the mineral impregnation. I am inclined to believe however, that all these causes have often conspired together, and that the emaciated subject of disease is more frequently restored to health by a concurrence of cooperating circumstances, than by the single efficacy of any one of them. I also believe that more benefit is ascribable to the other causes assigned than to that of the Mineral impregnation, and that the latter is never productive of any good unless taken internally. I will further add that after reading Dr. Currie's "Medical Report" on the cold and warm water affusions, in

Febrile and other diseases, I was struck with the extensive application and persevering industry with which he conducted his experiments with respect to the cold affusion. To this Physician, we are indebted for many facts, which, previous to his day, were unknown. His diligence in ascertaining, by thermometrical observation, the actual heat of the Animal system, in certain diseases, renders his work of the highest practical importance, and affords new grounds for pathological speculations. These are some of the considerations which influenced me in the selection of this subject: and though I do not expect applause, I trust I shall escape censure, when it is known that I exhibit with reluctance what I have been compelled to write in compliance with that law, which knows not partality, and which must stand as a lasting monument of the wisdom of its framers.

Preliminary Remarks

In treating of the practical application of the Cold Affusion, I shall select those diseases wherein its utility is most conspicuously manifested. To mention all the diseases wherein the cold bath has been found useful, would extend this essay to an unwarrantable degree of prolixity. I shall confine my remarks on the subject of the cold affusion, to Typhus Fever and Small-pox, and shall add a few observations on Intermittent and Remittent fevers. The extensive subject which I thus embrace, will not permit me to consider the minutiae of the Diseases of which I am to treat: If it did I would not hesitate to acknowledge my incompetency to the task.

I have preferred the Affusion to the Aspersion, because the shock made on the system is more sudden, powerful and lasting, and to Immersion, because the system is, by the process of evaporation, relieved more speedily from its preternatural heat, while

at the same time the Affusion is more convenient.

— I shall make a few remarks on the manner of using the Cold Bath by different nations, for the purpose of illustrating the powers of the system in resisting the injurious tendency of the sudden vicissitudes of heat and cold.

"Vitavi denique culpam,
Non laudem mercis."

Turning to the pages of antiquity we find the use of the cold bath in disease, of long standing. The first authentic account we have of its use is to be found in the early part of the history of Greece. Melampus, a famous Greek Physician of his day, is said to have been the person who first prescribed it. His first experiments are said to have been made on the Daughters of the King of Argos, a celebrated City of Peloponnesus. At so remote a period of antiquity, it is not to be expected that we should be accurately acquainted with the circumstances which first gave rise to its use. The Cold-bath has, in all ages of Society, been considered one of the greatest luxuries of the World. The excess to which the Greeks, and particularly the

Romans, carried it, proves the correctness of this assertion. The Baths of Rome, in point of number and magnificence, remain unparalleled in the pages of history. Among the causes which conspired to the downfall of the Roman Republic, may justly be ranked the excessive indulgence of her citizens in the use of bathing. The excess, to which the Romans carried the use of the cold and warm bath, is well known; it is described by all historians as one of the greatest excesses to which that Nation was enslaved. For the purpose of increasing the luxury of the bath, they were in the habit of bathing alternately in the warm and cold bath. This from repetition proving ineffectual, the baths were made hot, and after being immersed for some time in a bath of this increased temperature, they rose and received successive buckets full of cold water from a person stationed at the bath. This for a while increased the pleasure of bathing, but finally by destroying sensibility, weakening the body and enervating the mind, hastened on that fatal ~~degra~~ degradation from which they never emerged. "In the bagnios of Imperial Rome, the last of the

Romans, the followers of Zeno and Cato were melted down into slaves; the powers of their minds became enfeebled, the vigour of their frames decayed, and they lost forever the bold impressions of freedom and of virtue."#
The confidence reposed by different nations in its prophylactic powers, has given it an elevated station in their Religious Ceremonies. It is much to be regretted that the Moderns use it too little. In the summer season when the body is loaded with perspirable matter, the frequent use of the cold bath is of the highest importance. That it has thus been disregarded appears the more singular, as cleansing and washing the body was incorporated with the police regulations of the Jews, and even by the primitive Christians it was deemed of paramount utility, both as a preservative of health, and as preparing their minds, for those pure devotional exercises, in which they were engaged. Ablution, this almost obsolete practice, has however, been happily revived, not only with the view of fortifying the system against the attacks of disease, but has become one of the most potent remedies in the hands of the Physician. The successful treatment of fevers, those grand avenues to death, has ever been a desideratum among the

Dr Currie's Medical Reports on the use of cold and warm water.

Medical men of every nation, it has called forth the talents and energies of the wisest, and greatest; but human contrivance and ingenuity has been defeated in its object, no medicine has yet been found to be an invariable cure for those formidable enemies of mankind. Notwithstanding these discouraging facts, more has lately been done towards robbing fevers of their virulence, by simple Washing, than all the long and complicated lists of compounds, prescribed by the older Physicians. The manner of using the bath among the Russians, although different in some respects, is analogous to that of the Romans. Their bodies are heated in a bath at the temperature of from 116°. to 160°. of Fahrenheits thermometer, and on leaving the bath they roll naked in the snow, and so return to the warm bath and the snow alternately. The experiments of Sir Charles Blagden, Dr. Fordyce and others show what sudden changes of temperature the system is capable of supporting without injury. These Gentlemen after remaining in a Room heated to the temperature of 240°. and 260°. of Fahrenheits thermometer, went out in the cold air with impunity.—
The Aborigines of this County are said to have

been successful in performing cures by their manner of bathing, which consists in exposing the body of the patient to a heated and moist atmosphere, produced by throwing hot stones in a tub of water; after remaining in this for some time and until the body is covered with a profuse perspiration, they then leave the room and plunge into the River. Among the moderns, the Turks excel in their manner of luxurious bathing. They produce copious perspiration by the vapours which arise from hot water and mix burning perfumes with the aqueous vapours which constitute the bath. Perfumed soaps and pomatums are exhausted, and costly essences are lavished in profusion to gratify the senses. The Women wash in Rose-water, blacken the edges of their eye-lids, (and lengthen their eyebrows with a preparation of Cohel (or a preparation of tin burnt with gall-nuts) they also stain their finger and toe-nails with Henne, which gives them a golden colour, and finally the sweet steam of the wood of aloes, is passed through the linen and clothing which they wear. ——— I shall now proceed to the more immediate object of this essay.—

"Each side a cohort of diseases stands,
And shudd'ring Fever ~~leads~~ leads the ghastly bands;"—
Darwin Tem. Nat.

Intermittent Fever first claims our attention. No inconsiderable portion of the diseases of our Climate are the results of long protracted intermittents. Although intermittents, in their ordinary form, are easily eradicated, we occasionally find them of the most intractable nature. Intermittent fever is too well known to require a definition. This form of fever is most prevalent in Autumn, when it appears in this County as an endemic disease. There are cases however where the latent predisposition is not called into action until late in the winter, when from the operation of some exciting cause Intermittents are produced. They sometimes however are not manifested until the Spring. Sometimes they make their appearance earlier than usual, and we not unfrequently see them in the middle of Summer. But, as I have before said, they are the most prevalent in Autumn. This is easily to be accounted for by the well known causes of Intermittents,

marsh miasmata and animal and vegitable putrefaction, operating with greater virulence at this season of the year than at any other. The remote causes of intermittents I have already mentioned. The exciting causes are sometimes hidden in obscurity. All those causes which produce debility, such as intemperance in eating or drinking, exposure to cold and moist atmosphere, night air and fatigue, are supposed to operate as such agents. The proximate cause is located in the stomach. As this disease is composed of repeated and distinct paroxysms, and each paroxysm of three stages, the cold, hot and sweating, Practitioners have modified their treatment to suit these several stages of the disease: first, in the cold to excite the hot; secondly, in the hot, to excite the sweating; thirdly, in the interval or apyrexia, to prevent the recurrence and give strength to the system. Various medicines have been recommended to perform these several indications, of which it does not come under my province to speak. In the cure of intermittents the first

indications is to evacuate the stomach and bowels, where symptoms indicate venesection. The occasional administration of diaphoretics and a course of tonics, generally constitute the treatment in this disease.
As I have before said, we occasionally find them to resist all our remedies. These are the cases wherein I conceive the cold affusion particularly applicable. Before I enter particularly upon the treatment of fever with the cold affusion, I shall lay down a few general principles, which are to govern its application.
First, by the term cold bath, we mean any degree of heat not above 65 and not below 35°. of Fahrenheit's thermometer. These degrees may be varied according to circumstances.—
Secondly, the cold affusion should not be given in the cold stage of fever, or when the patient experiences any sensible degree of cold—
Thirdly, The cold affusion is not to be given when the patient is in a perspiration, or at least, not long after perspiration has commenced.

Fourthly, The cold affusion should not be given when the heat of the patient is not above the natural standard.
Fifthly, The nearer the heat approaches to that of health, the less should be the degree of cold.
Sixthly, The greater the degree of heat of the patient, the lower should be the temperature of the bath.
Seventhly, It should not be given when there are visceral, particularly pulmonic, congestions.
Eighthly, The heat of the patient must be taken with a thermometer applied under the tongue, or in the axilla, of the patient.
Ninthly and lastly, Attention is to be paid to the state of the system and the effects produced.
Under these restrictions the cold affusion may be given in almost all diseases.
Judging from the effects of the cold affusion in diseases of association, we have every reason to admit its utility in that form of intermittent fever of which I am treating. From the impression made on the

system by the cold bath we can readily conceive how it operates in the cure of intermittents. All diseases depending on the force of habit, and we suppose these obstinate cases of intermittents to be such, require for their cure such remedies as make a sudden and powerful impression on the system. If this reasoning be correct, where shall we find a remedy more admirably adapted to the cure of the disease under consideration than the cold affusion? The cold affusion applied about an hour or two before the expected paroxysm, tends to prevent the recurrence of the fit, by the reaction which follows its application. Given in the hot-stage of fever, it diminishes heat and thirst, which are followed by diaphoresis and a solution of the paroxysm. The frequent use of it in the apyrexia of fever, strengthens the system and has a tendency to dissolve those morbid concatenations, upon which the diseased actions depend. Combined with other tonics, I am inclined to believe that there is no

case of intermittent fever, which may not be subjugated by this potent remedy.

The Cold Affusion has been found useful in Remittent fevers. Dr. Chimery, who had charge of an extensive fever-Hospital at Lisbon, speaks of it in the following terms "From the numerous cases of this disease in which I have witnessed the marvellous good effects of Cold-water affusion, in bringing on an immediate Remission, I can not but consider this remedy as of sovereign power and efficacy in the cure of Remittent Fevers." To which he adds "primam meruit quod laude coronam". This Physician also informs us, that he met with equal success in the use of the cold Affusion in the Yellow-fever of Jamaica. "This important discovery (the cold affusion) by the late ingenious Dr. Currie of Liverpool, for cutting short and annihilating the febrile paroxysm, I have frequently put to the test of experiment in treating the Yellow fever, as it is called, of Jamaica with

decided success, whenever I was fortunate in having early access to the patient, as was generally the case when Officers were attacked." Doctr. Jackson, who resided sometime in Jamaica, and whose work on the diseases of that Island is held in high estimation, speaks of the cold Affusion to this effect: "Cold bathing, indeed, is the remedy on which we most principally depend. There are others which do good occasionally; but this is the only one I know, which has any very considerable effect in changing the nature of this disease". He recommends the bold administration of the cold bath. "We ought always to bear in mind, that in dangerous and difficult cases, feeble remedies, or even powerful ones timidly used, are of little avail. Cold bathing, employed with timidity, failed of doing good in some instances. I met with no example where the boldest use of it did harm. It was seldom, I must again repeat, that it did not succeed in obviating irritability, in checking the putrescent tendency, and imparting to the system

that degree of tone and vigour, in which safety is observed to consist." I shall not enter into the discussion with respect to the nature of the Fever in Jamaica.

On the use of the Cold Affusion in Synocha, I have nothing to add. This is a fever of rare occurrence, so much so that I am inclined to doubt the existence of it altogether. The late Venerable Professor of the Practice of Medicine in the University of Edinburgh, Doct. Cullen, declared that he had not seen a case of pure Inflammatory Fever in forty years practice.

Typhus Fever.

The next subject which claims our attention is Typhus Fever. This disease has received different appellations from different Authors. It is the Contagious Fever of Doctr Lind. The Febris Invivitativa of Doctr Darwin, — The low Nervous and

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Jail Fever of other Authors; — And, from the Malignant manner in which it manifests itself in some constitutions, the Putrid Fever. It is the fifth Genus of the order Febres, and first Class of Cullen's System of Nosology, and defined as follows:—
"Morbus contagiosus; calor parum auctus; pulsus parvus, debilis plerumque frequens; urina parum mutata; sensorii functiones plurimum turbatae; vires multum imminutae." Typhus mitior and Typhus gravior are only different degrees of violence of the same disease. This disease is generally produced in places where there is a want of due cleanliness, in confined places, and illy ventilated apartments; and when produced, is apt to spread. If we confine the term contagion to those diseases which are communicated by contact, or to those diseases propagated by a specific virus the result of a glandular process, this disease can not strictly be called Contagious. It might with more propriety, be called Infectious. In the

course of this disease the Animal, Vital and Natural functions are variously affected. This disease is generally ushered in with nausea and vomiting, an uneasy sensation about the præcordia, dejection of spirits, pains in the head, back, and loins, anxiety and confusion of thought. After the disease has lasted for some time, these symptoms are aggravated, to which is added watchfulness, great debility, tremours, subsultus tendinum, convulsions and death. This is the course of this fever when not arrested in its progress.
Numerous are the Authors that have written on, and various are the remedies that have been recommended, in this disease. Of the Writers on this disease I shall only notice two, Doctors Hamilton and Currie.
At first view Doct. Hamiltons practice would appear unwarrantable. But the success which attended it shows its superiority over the ordinary mode of treating typhus fever. He commenced with the administration of an emetic, which was followed up by

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the daily use of cathartics, generally calomel combined with jalap, salts, senna, rhubarb or some other purge; the occasional use of enemata, and an occasional anodyne in the evening. This, with some little variation, constituted his mode of treatment. Doctor Hamilton contended that by the frequent use of purgative medicines, you not only remove from the primae viae the accumulated faeces, but you also remove from the intestines the sordes, which is generally collected on their internal surface, and thereby not only remove a source of irritation upon which the continuance of the fever depends, but also give tone to the alimentary canal, and from thence to the whole system through the medium of sympathy. In short, he contended that purging, so far from debilitating the patient, acted as a stimulant to the system. Viewing the symptoms which mark the approaches of this disease, which I have already mentioned, and taking into consideration the extensive chain of sympathies which exist between the

alimentary canal and other parts of the body, we see at once the plausibility of the purgative practice. But at the same time, I am disposed to give the preference to Dr Currie's manner of treating typhus fever. If I should be wrong in this preference it is because my experience is so limited in this disease, that Clinical knowledge has not yet taught me the correct method of treating a malady, upon which, the Profession is so much divided. While I give the preference to the cold affusion, purging as an auxiliary is not to be lost sight of. Doctr. Currie's manner of administering the cold affusion, consisted in pouring repeated buckets-full of cold water on the patient during the exacerbation of fever, or at any period of the disease, when the heat of the patient was steadily above the natural standard; and when the powers of life were not too much exhausted. He recommends the affusion to be applied as soon as possible after the attack. Although his practice was attended with more uniform success when the affusion was early applied, it did not

prove inefficacious when administered on the eighth and ninth days of the disease. When early applied, it cuts short the disease at once; and when given in the more advanced stages of fever, it strengthens the system and prevents those fatal terminations which are so apt to take place in this disease. Doctr. Dimsdale Physician to the house of Recovery or Fever Hospital in London, and who has had considerable experience with the cold affusion, and the result of which experience goes to confirm the reports given by Dr. Currie, speaks to the following purport: It appears unnecessary to relate the other cases in which the cold affusion had been used. In all, the good effects of it have been strikingly manifest, and in no instance has the disease terminated fatally after the use of this remedy. In the early stages of typhus the affusion, with very little assistance from medicine, appears to cut short the progress of the disease.

In the more advanced periods, when the strength of the patient is sufficient to admit the application of this remedy, it moderates the violence of the symptoms, and contributes materially towards a favourable termination."

A mixture of Vinegar and water is supposed to be better than simple water; and from the experiments made by Dr Currie with a saturated solution of Muriate of Soda, he thinks the water is not only made more stimulating, but that the sedative effects of the affusion are thereby obviated. The immediate effects of the Cold affusion are as follows; it diminishes heat, allays thirst, removes anxiety, alleviates pain and produces a determination to the surface, which is speedily followed by diaphoresis and sleep. Its more permanent effects are those of a tonic obviating debility and increasing the energy of the system. In the advanced stages of typhus where the vital powers are much depressed, the superiority of the tepid affusion or sponging the body with vinegar and water, over the cold affusion can not be denied; in such cases the Author of the "Reports" was in the habit of preceding the cold affusion by

the administration of some of the diffusible stimuli, such as, wine, ether, volatile alkali and such other stimulating articles as would be likely to rouse the Vis Medicatrix Naturae to increased efforts.

That venesection is warrantable in some cases of this disease, there can be no doubt. This is indicated by the inflammatory state of the system, such as hard pulse, suffused countenance, tendency to phrenitis, and the increased temperature of the patient. Although the last symptom may appear inconsistent with Cullen's definition which I have adopted, nevertheless it is well known, that a morbid accumulation of heat, is one of the most troublesome and aggravating concomitants of this disease. This fact is admitted by most Physicians, besides being proved by the accurate thermometrical experiments of Dr Currie.

From the prejudice which exists in the country among the lower orders of Society, the cold affusion is not likely to be of so much service as the purgative practice; but in Cities, in Hospitals and other Public Institutions, this practice promises more, according to my opinion, than any

other mode of treatment. During the prevalence of Epidemical diseases, we are told, that by the frequent use of the cold bath, the susceptibility of the system to the impression of contagious or infectious matter is diminished, and a protection is thereby afforded not to be obtained by any other means. In the fever which broke out in the 30th Regiment of Soldiers quartered at Liverpool, in the year 1792, described by the Author of the "Reports," all the usual means for preventing the disease from spreading were used without effect; and it was finally arrested by the use of the cold bath. The Professor of the Practice of Medicine in the University of Pennsylvania, mentioned in his Lectures that while he was in Edinburgh, fifteen hundred men in Admiral Duncan's fleet were attacked with Typhus fever and were carried to the Hospital in that place. The Symptoms were pain in the head, hot skin, and great restlessness all of which were removed immeadiately by the cold affusion.

Although in this County the cold affusion has not met with such general support, it is nevertheless gaining ground. Professor Chapman

recommends it in Typhus, but he prefers sponging the body with water to the affusion. With the few desultory remarks already made I shall dismiss the order Febris and proceed with the consideration of Small-pox.

Small-Pox.

My remarks on this disease will be few and general. This is the first Genus, of the Order Exanthemata, and first class of Cullen, and defined as follows:— "Synocha contagiosa cum vomitu, et, ex epigastrio pressu, dolore. Tertio die incipit, et quinto finitur eruptio papularum phlegmonodiarum, qua, septio octo dierum, in suppurationem, et incrustas demum abeunt, saepe cicatrices deprepas, sive foveolas incute, relinquentes." Happily for mankind the casual small-pox, by the introduction of vaccination into practice, has become a more rare disease than formerly. This improvement in

medicine, by the ingenious Dr. Jenner, has also done away the necessity of the once common practice of Inoculation. Previous to the practice of vaccination the fatal effects of this disease are well known. The melancholy pages of Medicine must ever attest the number of the unfortunate victims who were sacrificed to this dreadful Malady. This disease is one, which may truly be called contagious. Here we have the specific matter of contagion, elaborated by a glandular process, which matter, is capable of self propagation independent of situation, season, climate, age or sex. Of this disease some practitioners have made two species, the Distinct or Mild, and Confluent or Malignant. These two species are the same disease, produced by the same specific virus and modified only by peculiarities of constitution. In the former, the febrile symptoms are of the Synocha, in the latter of the Typhoid type. In the Mild Small-Pox, the pustules are less in number and distinct; in the malignant they are more numerous and confluent. All the symptoms in the confluent small pox are more aggravated and consequently more dangerous. Practitioners are pretty well agreed with respect

to the treatment of small pox. The antiphlogistic regimen, saline cathartics, acidulous drinks, and keeping the body of the patient cool, generally comprise the treatment of this disease. This treatment, in the mild form of variola, is generally sufficient. But as this disease, in its mildest form, is apt to assume the malignant, and as in some constitutions it first appears in this form, practitioners have been compelled to look for a remedy, which superadded to the above, would be likely to subdue the malignant nature of this distemper. In the cold affusion they have found a remedy which surpasses all others in moderating the symptoms of variola, and conducting it to a more happy issue. For the superiority of the cold affusion over other remedies in the treatment of variola, we have only to consult Currie's "Medical Reports". As the practice of inoculation for variola is at present exploded by most of the enlightened Physicians, my remarks will be considered as particularly directed to the natural small-pox. When patients are affected with symptoms of variola, at a time, when this disease appears as an Epidemic, we are told by the

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highest authority that the early use of the cold affusion, is attended with the most happy effects. Although in this disease, we can not, as in some others of the exanthemata, extinguish the disease at once, we can moderate all the symptoms, and thereby render the patient more comfortable, and prevent those disfigurations which generally supervene, and which to females is of considerable importance. As the eruption depends altogether upon the fever which precedes it, being greater in proportion to the fever; it is evident that all those means which lessen fever, will mitigate this disease. The power of the cold affusion in Febrile affections, I have already mentioned. From the foregoing observations it is obvious, that we resort with most advantage to this remedy, during the incipient or eruptive fever of Variola. To confirm this part of my subject, I have no higher authority than: the following emphatic remarks of Dr Currie "This however, I can declare, that in all the cases in which I have used the effusion of cold water during the eruptive fever, however severe the symptoms may have been, these symptoms instantly

abated, and the disease instantly assumed a benignant form." For the pathological views which I have taken of small pox, the modus operandi of the Cold Affusion will be readily understood.

To extend the limits of this Essay further, would hardly be deemed a proper compliance with the rule in obedience to which it was written. An apology for the deficiency of experimental matter would therefore be unnecessary, even if I were able to furnish it, and the introduction of it were within the scope of my intention. The subject has long been neglected by many Practitioners in this Country and the Authors who have treated of it have either slumbered on the shelf or their monitions have rarely been regarded. The importance of the remedy considered has caused me to swell this Essay beyond the boundaries usually prescribed on such an occasion, but if the facts which are collected in it should be thought of sufficient weight to induce any to revive or extend this practice of so much benefit to mankind no excuse for the manner in which they are offered can be wanting.—

Nothing therefore remains for me to add but to tender to the Medical Professors my most sincere thanks for that politeness and attention which have marked their Conduct since I have been their pupil. The path to knowledge in all Professions is laborious and gloomy.— In ours it is perhaps peculiarly so, and would be rarely traversed with success were it not irradiated by the light of you who have gone before us.— A light which from the summit of Professional reputation exhibits at once the mazes of error and the ascent to truth, and whose cheering influence is proportioned to the height and distance of the eminence upon which it glitters.

Finis.

Hydro Cyanic Acid

Class 35

An Inaugural Dissertation,
On the
Efficacy of the Hydro-Cyanic
Acid in the treatment of Phthisis
Pulmonalis, Submitted to the
Faculty of Physic
in the
University of Pennsylvania,
by
John Dingly

Defend March 15th 1823